

Is it always Alzheimer's? Let's talk to our patients about “cardiocerebrovascular” prevention

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Abstract Unlike Alzheimer's, vascular dementia can, in part, be prevented. The preventive approach foresees treatment for high blood pressure, atrial fibrillation, diabetes, high cholesterol, low HDL cholesterol, sedentary lifestyle, smoking, alcohol abuse, obesity, and sleep apnea. Moreover, also a well-balanced diet and physical activity are cornerstones of prevention, with beneficial effects on the brain and cognition.

Keywords Alzheimer · Vascular dementia · Risk factors · Prevention

This communication takes its inspiration from an event organized in the context of the Science Festival, at the *Parco della Musica* Auditorium, in Rome, where the short film, “Candida's Smile” (*Il Sorriso di Candida*, Rita Bugliosi, Angelo Caruso), was shown. The journalist and the filmmaker skilfully tackle the typical problem of Alzheimer's disease: fading memory, through the character of Candida, played by a superlative Lucia Batassa.

Too often, we use the term Alzheimer's not only to denote Alzheimer's disease in the strict sense, in which it is linked to Tau proteins, β -amyloid plaques and neurofibrillary tangles, but also to describe all the forms of dementia, including vascular dementia. Vascular dementia is not only the consequence of dramatic cerebrovascular ischemic events, or massive haemorrhagic stroke, the most

common cause of death in industrialized countries after coronary heart disease and tumors, and the main cause of long-term disability. Even micro-events (“mini-strokes”) due to micro-infarcts and hemorrhages, which are often asymptomatic, by causing alterations in brain mass, lead to multi-infarct dementia (MID) characterized, like Alzheimer's (and hence the confusion), by slow but steady cognitive impairment and memory loss.

Unlike Alzheimer's, vascular dementia can, in part, be prevented. The prevention strategy is threefold: modifiable risk factor control; antithrombotic/anticoagulant therapy; and carotid surgery. And while some risk factors—such as age and genetic predisposition—cannot be modified, we can try, with a certain degree of success, to reduce other factors.

The preventive approach, in the first instance, foresees treatment for high blood pressure or atrial fibrillation—the factors most directly related to cerebrovascular events. But it also addresses, for instance, diabetes, high cholesterol, low HDL cholesterol, sedentary lifestyle, smoking, alcohol abuse, obesity, and sleep apnea [1–4].

Therefore, explaining to our patients and highlighting that the risk factors mentioned here are responsible not only for the well-known events such as heart attack and stroke, but also for the less well-known, MID, underlining that these factors can be corrected, could increase their knowledge and awareness of the risk and result in greater pharmacological adherence and thus more effective cardiocerebrovascular disease prevention. Moreover, there are growing evidence that many nutrients and bioactive components typical of Mediterranean Diet and the moderate, but regular physical activity can have a beneficial effect on the brain and cognition [5, 6]. Therefore, a well-balanced life-style is a cornerstone of prevention and good health at every age, also at third age.

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In this way, we can enhance the lives of our patients not only in terms of increased life expectancy, but also as regards the number of years of good/acceptable physical and mental health they can enjoy. This is rewarding in terms of the clinical benefits, and can contribute to reduce health care and welfare expenditure.

Compliance with ethical standards

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

Ethical approval This article does not contain any studies with human participants or animals performed by any of authors.

Informed consent For this type of study formal consent is not required.

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